‘COMBUSTIBLE MATTER’:
IOLO MORGANWG AND THE BRISTOL VOLCANO

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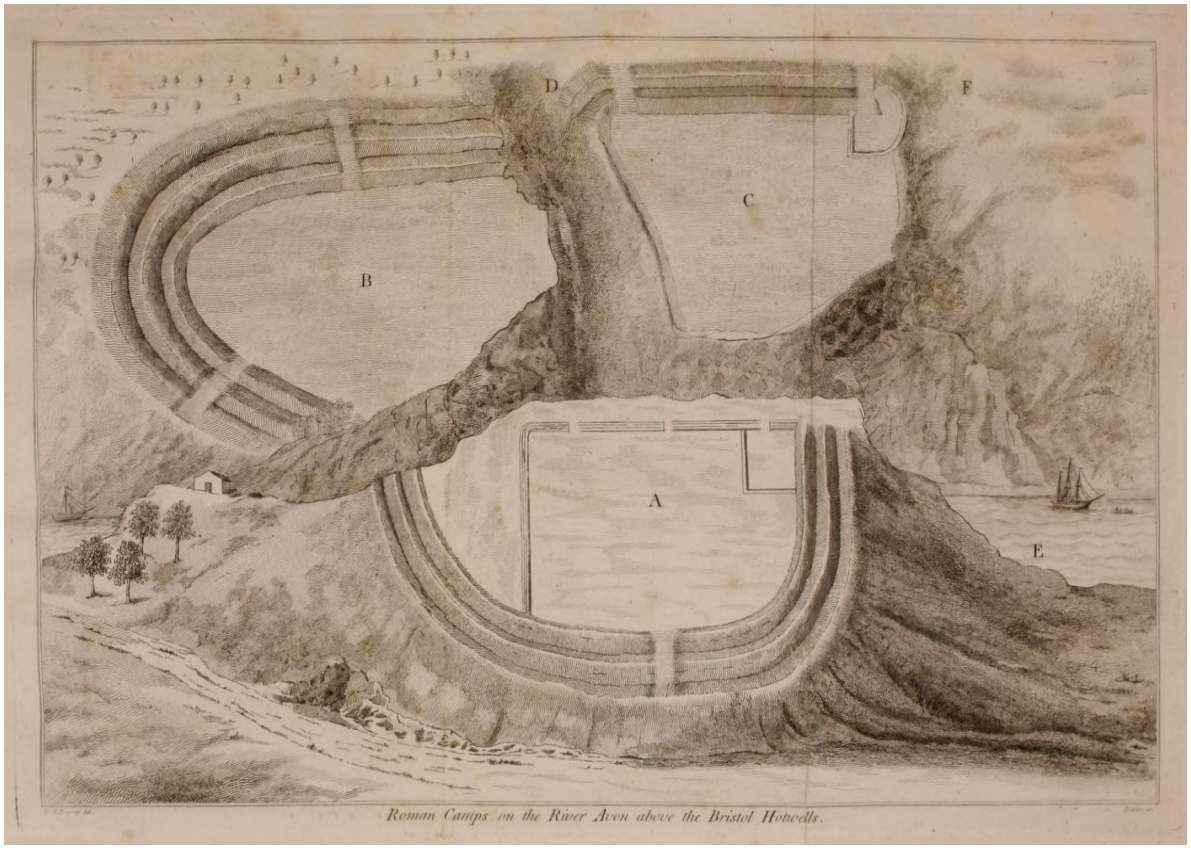
RHAGAIR / FOREWORD

Fel y gwyddys yn dda, prif orchwyl cymrodyr ymchwil Canolfan Uwchefrydiau Cymreig a Cheltaidd Prifysgol Cymru yw paratoi cyfrolau sylweddol ar rai o themâu canolog llên a hanes Cymru. Ond y mae'r bwrlwm o weithgarwch a geir yn y Ganolfan hefyd yn cynhyrchu darnau llai o ymchwil sy'n dwyn perthynas uniongyrchol neu anuniongyrchol â'r themâu hynny. Nod y gyfres hon, felly, yw rhoi cyfle i'r cymrodyr ymchwil gyhoeddi peth o ffrwyth eu llafur ar ffurf darlithiau neu ysgrifau. Ein gobaith yw y bydd y papurau ymchwil hyn yn tynnu sylw at broblemau diddorol a pherthnasol ac yn cymell y darllenydd i ailystyried hen ddeongliadau.

As is well known, the principal task of research fellows in the University of Wales Centre for Advanced Welsh and Celtic Studies is to prepare substantial volumes on some central themes in the literature and history of Wales. But this vigorous activity also produces shorter pieces of research which are directly or indirectly associated with those themes. The aim of this series, therefore, is to encourage research fellows in the Centre to publish some of the fruits of their labours in the form of lectures or essays. Our hope is that these research papers will draw attention to interesting and relevant problems and also persuade the reader to reconsider old interpretations.



Roman Camps on the River Avon above the Bristol Hotwells
William Barrett, *The History and Antiquities of the City of Bristol* (1789)
(by courtesy of the National Library of Wales)

‘Combustible Matter’: Iolo Morganwg and the Bristol Volcano

In December 1791 the Welsh poet and stonemason Edward Williams, better known by his bardic name Iolo Morganwg, climbed Brandon Hill in Bristol. The ‘cursory observations’ that resulted – some two-and-a-half sides of closely-written text – make fascinating reading. Like many of Iolo’s geological writings, and for all the apparent eccentricity of its initial premise, the piece rings with conviction as the observations of a worker in stone fuse with the long vision of the antiquarian. This description of the geological composition of the hill and the forces that shape landscape reveals both a practical and intellectual engagement with the study of earth science at a crucial point in its development; yet it is also the record of a moment in a life. Iolo’s prose is always confident, but there are clues to suggest that the energy of this piece owes much to the time and place it was written: the poet, and the Jacobin, are in there too. As several recent studies have shown, the birth of scientific geology at the end of the eighteenth century is intimately bound up with its turbulent social and political context; inversely, geological theory and terminology rapidly penetrated contemporary political and literary thought, giving models and metaphors to a revolutionary age.[1] Iolo’s account can be read in various ways.

Brandon Hill, as the guidebook for 1794 has it, ‘affords those who mount it a beautiful view […] of the country for many miles round’, and in particular of ‘the Welch mountains beyond the river Severn’.[2] Though Iolo often visited the city in various capacities as merchant and stonemason, this moment on the hill at the end of 1791 was significant. He had spent much of the year gathering subscriptions for his collection of English poems on subjects ‘lyric and pastoral’, assiduously courting the literati of Bath and Bristol for their patronage. Now he stood between his native Glamorgan and London, where he planned to make his name. Like other provincial writers who needed gentry support to publish, Iolo had an ambivalent relationship with the mercantile, slave-trading city at his feet: his dependence on and admiration for ‘one of the most splendid Cities in the Kingdom’[3] could readily turn to satire and disgust. From this vantage point it is also just possible to make out the shadow of a predecessor, another forger of pasts, the Bristol poet Thomas Chatterton.

> *Cursory observations on Brandon Hill, Cliffton Hill etc near Bristol – Decr 19th 1791. By E. Williams*.[4]
>
> Brandon Hill derives its’ name from the saxon *Bren* to burn, whence *Brent*, burnt, and *Dune*, a hill (whence the modern *down*) – and so signifies *Burnt Hill*, or *Burning Hill*. It has, as its very name implies, evidently been a *Volcano.* The mouths of several craters are still partly open, the most remarkable of those are one on the south side half way up the ascent, and that on the summit, which is the largest and still open at its mouth in form of a bason. Around the foot of the hill are large beds and masses of *Lava*, the substance of which is Iron that has beyond all doubt been in a state of fusion, in it are seen fragments of the rock, and other substances of which the hill

consists. On the south side this lava appears naked above the surface of the ground in vast masses eight feet at least above ground, and it has not yet been ascertained to what depth. On the east side, to which the new buildings have been lately extended, places have been found which appear to be large cavities; in some places, though surrounded on all sides with rock, they find nothing but a loose bottom consisting of the scoria of Iron, cinders and ashes or red burnt earth and other volcanic substances to an unknown depth. And are in those places or cavities so filled up with volcanic matter, obliged to make artificial foundations with piles etc. for the buildings.

The bowels of the earth here abouts abound in combustible matter, Kingswood Colieries are hard by, and the veins of coal run under the City of Bristol, Brandon Hill etc., where it is probably reduced to ashes and cinders, even Eastward as far as Bath which is in a straight line no more distant than about eight miles. The volcanic fires are, probably, not yet quite extinguished, and are seemingly the causes of heat in the Bath and Bristol Waters: and who knows but that those fires may encrease again to a terrible height, may once more gather strength sufficient to burst again in volcanic eruptions out of their caverned recesses, and produce those terrible effects which they seem to have done once, at least, before. A very hot spring has lately and suddenly issue'd out of the earth a little below the Hot-Wells, at the foot of St Vincent's rock. Iron ore in its natural rocky state, of far greater warmth than any thing known at Bristol before, has late been found in the adjoining Hill of Cliffton, but all in and about Brandon Hill has evidently been fused.

The vein of combustible matter extends far westward: twenty miles or more from Bristol are hills called *Brent-knoll*, *Brent Down*, a place called *Burn-ham* etc. all deriving their names from having been burned. In all those places, and many more, the same volcanic appearances occur as in and about Brandon Hill, subteranean beds of cinders, scoria of iron, ashes etc. very deep under the rocks, and frequently dug out of the hills for repairing roads etc. The same veins and strata of stone, coal, iron etc. are continued under the Bristol Channel into Glamorganshire in Wales, and exibit there many volcanic appearances; and at Taff-well above Landaff are hot springs like those of Bath, to which poor people, that cannot afford to go to Bath, repair.

The eruption of Brandon Hill seems to have occasioned an Earthquake formerly which caused that prodigious chasm of St Vincent's rocks or rent in the hill seperating Cliffton Hill from Leigh Down. Thro' this rent between the rocks of St Vincent, the River Avon found a nearer way into the Severn Sea, forsaking its old course which may still be traced thro' its ancient vale, which going southward of Leigh Down falls into the sea at King-road near Ports-head point.

On Leigh-Down of which Cliffton Hill was then a part, was constructed a large camp, seemingly Roman, consisting of a tripple entrenchment, whose large mounds were formed of stone and mortar in a rude manner, now almost

entirely covered with grass. When this convulsion of the earth occur'd, the camp was rent in two. One part appears now on Cliffton Hill, the other part, which is by far the largest, is directly opposite in Leigh Wood: those point at each other exactly, both parts correspond exactly which [sic] each other. From this it appears that the rending of the down must have occur'd subsequent to the formation of the camps, but that such an occurrence should have happened without being noticed by any Roman writer whatever that is now extant is astonishingly remarkable, it is difficult to fix on any period when this accident, consistent with the silence of the writers, could have happened.

Amongst other conjectures, we may suppose that the Romans having made a descent on this part of the island from the Bristol Channel, constructed this camp, but having been repulsed by the Britons were not able afterwards in less than half or, perhaps, a whole century to subdue this part of the country. During which interval this tremendous occurrence took place. Yet, granting that it was so, it will appear very wonderful that neither the traditions of the natives or its singularly recent appearance should attract the attention of any Roman writer, as it was not so very long before the island, at least the south part of it was entirely conquered. We will again suppose that it happened after the Saxon invasion. The Saxons were a rude people that had not the use of letters and it was not till long after, that they were converted to some sort of Christianity by Augustine the Monk, and by him first brought acquainted with letters. But the Britons were a learned people, and it was about this time that Gildas wrote in Latin, Taliesin and other Bards in Welsh, but not one of them take notice of any such thing as the rending of St Vincents rocks.

The Welsh name of Bristol is *Caerodor Nant Baddon*, in English, *The City of the chasm of the Rock in the Vale of Baths.* This is the most litteral rendering that can possibly be given of the Welsh name, tho' seemingly very periphrastical. This name occurs, I believe for the first time, in Nenius who wrote in the ninth Century, but he has only the bare name and mentions nothing of the Accident from which it seems to be derived. Earthquakes are mentioned by Taliesin. That happened in the time of the infamous Vortigern whose pallace was destroyed by one of them, and which occasioned such a high flow of the sea that many low and fenny places in Wales were destroyed, particularly a large tract of country called *Cantre'r Gwaelod* in Cardiganshire but nothing is said particularly of Bristol.

Stupid Bristol that never noticed the wonderful curiosities of nature that abound so much in every corner about it, almost if not entirely beyond what is to be met with in any part of Britain, and which crowdingly obtrude themselves so much on the half-opened eye, that one is astonished to think how the Demon of Idiotic Dullness could, with *Barrett*, pass by them daily without the least attention.

(It was at this time probably (Taliesin's) that this happened at Bristol).

The geological vision

Iolo Morganwg was not the only person seeing volcanoes in the British landscape in the 1790s. A year earlier the Royal Society had heard two letters from Abraham Mills giving 'Some Account of the Strata and Volcanic Appearances in the North of Ireland and Western Islands of Scotland': letters which promised, excitingly, to add new territory 'to that already proved by others to have been subject to the effects produced by subterraneous fire',[5] thus extending the igneous tract from south-west Derbyshire right up to Skye. Mills's description of Lossit Hill is not unlike Iolo's of Brandon: 'in short, from the very rude and irregular appearance of the summit of the hill, from its rising so suddenly from the Limestone, from the Whyn Dyke which runs through it, and which may be traced ranging far away to the north-eastward, I am strongly induced to believe it of volcanic origin'.[6] But Iolo need not have read Mills to have learned this way of looking at landscape: from the 1760s and 1770s the *Philosophical Transactions* of the Royal Society and other journals were regularly publishing the communications of men like Sir William Hamilton, Ambassador in Naples, who was keeping a close eye on the activities of Vesuvius. In a tour of the Rhine area in the 1770s he had deciphered the area's volcanic prehistory much as Iolo would decipher Brandon Hill:

> The craters on the mountains I visited are discernable, though much altered, and filled up by time and the rubbish thrown from the quarries that are constantly worked on their tops.[7]

And like Iolo but more gently, Hamilton marvelled that 'such visible tokens of great volcanic production, in a country so well inhabited, should not have attracted the attention of naturalists more than they seem to have done'.[8] Descriptions of the 1783 earthquakes in Calabria, too, would leave no doubt that even the prodigious chasm at Clifton might appear overnight at any point in history. This report in another of Hamilton's letters, for example, reads like a vivid model for Iolo's rending of the Roman Camps:

> At the same time the hill on which the town of Oppido stood, which extended about three miles, divided in two, and as its situation was between two rivers, its ruins filled up the valley and stopped the course of those rivers.[9]

These and other writings encouraged many further 'Vulcanist' interpretations of rocks and landforms in the latter half of the eighteenth century, as the theories of James Hutton began to gain the upper hand in the long-running battle between aqueous and igneous interpretations of the origins and composition of the earth.[10]

The question of what Iolo actually saw will be addressed at the end of this essay, but he certainly did not see a volcano: there is no igneous rock in Bristol, and Brandon Hill is mostly red sandstone. Iolo's reputation as an inspired forger of literature and history, and the antiquarian framework through which he interprets the landscape, might be thought to make him an unreliable witness; yet these observations do not read like fantasy, and there is no doubt that, as a professional, he knew a great

deal about stone. What then are his geological credentials? The complications involved in dating his copious manuscripts pose some problems, but the evidence of his correspondence suggests that Iolo's grasp of the 'new' science of geology mirrors the growth in precision of the subject itself during the critical years at the turn of the century. One senses a transition from the visionary style of the 1791 Brandon Hill piece to a more focused, more practical, approach (though it should be said that this does not impair the luminous quality of his writing about stone).

Certainly by the turn of the century Iolo's knowledge and understanding of fundamental issues was in tune with current thinking. In March 1800 he wrote to Owen Jones (known as Owain Myfyr) that he was on his way to London, via Bristol, and planned to stop off at Stonehenge: 'I want to notice the stone, I have often seen the place but not since I became a little acquainted Scientifically with the modern System of Mineralogy, which is necessary for a new acct. of Stone Henge.'[11] And in 1802, even as William Smith was working on drafts of his pioneering map (not fully published until 1815), Iolo was trying to get hold of two copies of a map 'to mark by proper colours, the Geology of Southwales'.[12] The Geological Society, set up in 1807, would make the collection and mapping of such data a priority. In fact there are various indications in letters of 1802 and 1806 that Iolo planned to incorporate a study of the mineralogy and geology of south Wales into the surveys he was undertaking for Walter Davies (Gwallter Mechain), who was working for the Board of Agriculture. Though, as he put it, it was 'not incumbent upon me, neither upon Mr. Davies, to concern ourselves in the least about mineralogy' for the Agricultural Survey, geological matters were clearly of great interest to both men, and Iolo seems to have worked intermittently on his map for several years.[13] The project did not come to fruition (and the maps or sketches he refers to seem to have vanished), but a small part of this material, dealing with soil types, made its way into the popular textbook published by Conybeare and Phillips in 1822, *Outlines of the Geology of England and Wales*.[14] The link between mineralogical composition and agricultural practice was clearly one of his main concerns, and he was conscious of how different minerals affect the production of different crops, and how deficiencies might be corrected. He stressed the practical applicability of the science in a letter to his son, Taliesin, in 1814: 'I wish you would apply yourself, a little occasionally, to the Study of Geology. Skill in this science with good moral habits, and no more of any other knowledge than you already possess, may in Glamorgan make a fortune to you.'[15]

Two letters in particular reveal Iolo's grasp of geological terminology and concepts, and his awareness of the uses that such knowledge might have. Practical considerations are to the fore in a letter written to the Cardiganshire Agricultural Society in 1802, proposing a scheme for investing in a 'miners' borer' to be shared between the Society's members: 'to bore the ground in proper places in search of minerals or fossil manures, &c […]. If limestone should be found, that infallibly indicates coal at no great distance, not under it, or over it, but running paralel to it in the same direction, or in the same line or angle with the equator, or meridian.'[16] A letter of 1817 to another 'Rev'd Sir', preserved in two lengthy drafts, deals mostly

with fossils, an understanding of which was by then recognized as crucial to interpretations of geological processes. Iolo's accounts of his fossils would make another article altogether – one cannot but be intrigued by his description of a prize find, now lost: 'the head of a small horned animal petrified in a quarry of limerock, I suppose that it must have been a fish'. Both drafts of this letter (which vary considerably) furnish detailed accounts of the various strata and mineralogical compositions to be found in Glamorgan rock. Again, the language seems technically assured ('I use', he writes, 'the terms that have been adopted by modern Geologists and mineralogists'):[17]

> In the conchoidal Strata, and between them we find very frequently the petrified shells of the Gryphites […] In the striated lias we find the petrifactions of a shell fish in form like the cockle, but the lamelar texture of the shell is exactly like that of the clam, hence I term it a Clam […].[18]

Towards the close of the letter comes an enthusiastic paragraph on the geological delights of his native county:

> Glamorgan is, I presume to think, the most fertile Spot in Geological varieties, productions, and exhibitions of any part of this Island, and that because the various Strata &c in all their various declensions or dips, bassettings &c exhibit themselves so obviously and unequivocally in a long extent of sea clifts, not less fifty miles, with the additional advantages of mountain crags, Iron and coal mines of very considerable depth. Derbyshire is a mineral District, but it has no Sea clifts wherein the Strata might be seen, and their various dispositions. Cornwal and West-Devon. are also mineral Countries, so are Carnarvonshire Angelsea &c, but neither of those Districts exhibit the great varieties of minerals, fossils, and arrangements that are found in Glamorgan.[19]

The Glamorgan bias is Iolo's trademark, of course, but his knowledge of the subject is real, rooted in practical observation as well as intellectual passion. He does not suffer dilettantes gladly, and has little patience with those who do not know the hard slog of collecting in the field:

> Specimens are requisite, but a sufficiency of them, are So ponderous, that a foot traveller will be a long time before he bring together a tolerable assortment of them, this is the chief reason Sir, that I have been seemingly so dilatory in waiting upon you with them; the frequent rainy weather of the two last years have also greatly frustrated my intended excursions, besides I had plan'd them on too large a scale, and my 72 years of age which will ere long be completed, tell me in very bold language that I must contract my scale. I wish to be correct and as systematical as possible, proceeding on true Geological principles, which is not merely to collect a number of morsels of uncommon Singular and occasionally beautiful fossils to be arranged orderly in a little pigmy cabinet of curiosities which may be term'd the baby houses of

> those who continue to be children, mere boys and girls all the days of a long life.
>
> I was for about three weeks last summer at Bristol at the invitation of a most valuable friend now no more, there I became acquainted with a Gentleman who is, or rather wishes to become, a Geologist, he has made some progress in the study. He introduced to several Gentlemen in Bristol and its vicinities who fancy themselves very profound Geologists because they have collected, or rather have purchased from collectors, a number of singular fossils as Spars, crystals, &c from Derbyshire, Cornwal, Hudsons Bay, and the old Gentleman in black below stairs knows where, (places however which they never saw) and fitted such collections up in a very quaint arrangment, forming such baby houses as I have mentioned. And it may be questioned whether some of those great Students of Nature know to a certainty whether their baubles have been produced like nuts or apples on the branches of a tree, or like potatoes in the ground at the root of a plant.[20]

This reads like an expansive echo of William Smith, who, in 1796, with the beauty of his system of stratification dawning fully upon him, wrote a heated note to himself castigating the collectors whose fossils are 'showed and admired with as much pleasure as a child's rattle or a hobby-horse', yet who failed to see the 'wonderful order and regularity with which nature has disposed of these various productions'.[21] Both men, from practical and labouring-class backgrounds, had reasons to dislike the armchair geologists.

But Iolo was also well-read. In 1814 there is mention of 'Smeaton' and 'Kirwan' – the latter's *Elements of Mineralogy* (1794–6, first ed. 1784) was clearly a fundamental text, and is mentioned several times in the letters. Three years later he claims to have

> dipt into several very recent publications on British Geology, all of them in my opinion lamentably, and some of them shamefully, defective. Dr. Jammison and Mr. Townson appear to me to be the best, they give a good deal of fact, which is much better, with the unavoidable deficiencies, than fanciful theory. Bakewell is very imperfect in my Opinion, he has not dived to a sufficient depth below the surface of the Earth.[22]

One can see, too, that ('fanciful theory' notwithstanding) he has ideas about the larger forces at work, the big questions which continued to matter even in the empirical climate of the early nineteenth century. Though clearly in the igneous camp in his volcanic interpretation of the Bristol landscape, his interest in stratification owes much to Wernerian principles, doubtless as mediated through the works of Richard Kirwan and others. One especially interesting piece brings fire and water together as agents of change: amongst the Llanover manuscripts, and bound next to 'Brandon Hill', is a passionate description of the stones at Newton Down, near Porth-cawl. It begins energetically with the Huttonian premise that landscape is formed by means of internal forces pushing outwards:

> Newton Down retains, and for ever will retain, the most convincing proofs of its' having been produced by a most tremendous volcanic eruption. The limestone strata have been thrown by it into all, and the most irregular forms and inclinations, horizontal, vertical declining in every direction, on the north side the Central Granite, by all other means eternally impenetrable, has been thrown up in wonderfully large masses, and these cover a surface of ground about two miles in length or more and not much less wide in some places.[23]

The notion of 'Central Granite' (mentioned again later and quoted below) recalls the Wernerian system of stratification, which accords granite the status of the oldest, deepest layer of rock.[24] Iolo distinguishes between 'semivitrified' granite boulders fused by fire, and those which have been forced up in their natural state:

> the vast quantities of unvitrified granite on the north side seem to have bursted up impelled by a pneumatic force attended with little or no fire, but the semivitrified masses on the south side were beyond a doubt reduced in their present form and texture by fire and thrown into their present places by a fiery explosion, when this (comparatively) little bubble of a World was bursting to pieces.[25]

This thrilling sense of landscape created through great convulsions is perhaps more dramatic than Hutton's 'perpetual motion machine' with its long-term scenario of landforms pushing up and eroding. Iolo's vision has definite elements of the 'catastrophist' interpretation – indeed, 'Newton Down' explicitly links the non-volcanic activity to the most favoured Catastrophe in the history of geology, the Noachian Flood:

> On the North side this Granite appears in its' natural state torn and forced up from its original bed by an impulse that in all probability shook the whole globe probably *when the chambers of the deep were broken*, *pan dorres Llynn Llion,* when the up-bursting waters covered the whole earth, the History of a dreadful deluge is written in indelible characters on Newton Down; in a language that can never be misunderstood. We have here a book infinitely more authentic than that of Moses, a Tale that none will dare to call a forgery or an interpolation in the History of this World and of Nature.[26]

That astonishing declaration of 'authenticity' (a subject on which Iolo has much to say) sounds like a direct response to the work of Alexander Catcott, the Bristol clergyman whose *A Treatise on the Deluge* appeared in 1761 with a second edition in 1768.[27] Catcott's aim was precisely to vindicate the biblical account of the Creation and the Flood as authentic in the face of increasingly 'heretical' ideas about the age of the earth. The idea of nature as a book to be read and interpreted was common enough, but Iolo does seem here to be echoing the *Treatise.* Compare, for example, the above quotation with this:

> Besides, as many of the effects of the Deluge are legibly written in the book of Nature, being engraved in the deepest characters in the hardest rocks all over

> the earth; so those, who would be at pains to read this book, who *would go up as high as the hills, and down to the vallies beneath, and enter into the dark chambers of the earth* (carrying the divine light in their hands) should find the inestimable treasure, should see that the world had been destroyed, and formed again, and in what manner this suprising transaction had been effected; and would by this means have full proof – that there is a GOD, – Who that GOD is, – and that he governs the world.[28]

Catcott's work is a prolonged and exalted hymn to the power of water: how, rising from the central Abyss, it dissolved the constituent parts of the earth before leaving it in its present stratified form. As Michael Neve and Roy Porter have shown, all anomalies and irregularities in the landscape had to be assigned to this single traumatic moment, and Catcott's own notebooks show the strain even he came under as the Deluge theory became 'overloaded' in the face of increasingly complex evidence.[29] Though Catcott's fieldwork is now considered both careful and perceptive, his published *Treatise* was a determinedly rearguard action for its time: a last-ditch attempt to square geological history with the biblical six-thousand year timescale devised by Bishop Ussher over a hundred years previously. In 'Newton Down' Iolo seems also to accept the notion of the moment 'when the waters of the deep were opened', but here the Flood is one of many causes of landscape alteration, rather than a single past event in a now quiescent world. Elsewhere in his manuscripts he tells a somewhat different story, claiming in a brief paragraph of autobiographical material to have 'discovered a Theory of the earth which strongly confirmed to me the truth of the Mosaic account of the deluge'.[30] This 'theory' (which he is happy to find in accordance with the thinking of the Swiss geologist J. A. De Luc)[31] cannot, however, be said to colour his various geological writings to any remarkable degree; nor does his bardic/mythological Deluge story about Hu Gadarn, a culture hero largely of his own creation, interfere with the observations and notes scattered throughout his papers and letters on soil-types and rock formations.[32] Perhaps if, like Catcott, he had attempted to synthesize his bardic and scientific beliefs in a single work, the strain would have become more evident. But as his work survives, in a complex mass of unfinished projects and sometimes contradictory opinions, one senses that theology and mythology did not fundamentally structure his geological opinions as they did his view of history. There is, for example, nothing extraordinary about the teleological view of providence expressed in the following:

> In the bursting to pieces of this globe (intended probably by the *Benevolent Creator* to throw the rocks into various dispositions that their mineral and fossil wealth might thereby be more accessible to us, after those minerals had been brooding and generating for ages under the rocks in their primeval undisturbed state) in this bursting to pieces I say, some huge masses and those containing the strata of coal were cast into something like the following disposition, or posture […].[33]

In spite of his idiosyncratic ideas about Druidism and Christianity, and his evident passion for elaborate systems of categorization, the blend of religion and geology evinced here is entirely orthodox for the time.[34] Ultimately, Iolo shares what Roy Porter describes as the 'geological vision' of his age: 'the belief that to read the story of the strata was to read an autobiography of great revolutions, decay and restoration, the struggle of titanic Earth forces'.[35] Even a volcano in Bristol is not an implausible result of that vision.

St Vincents Rocks and the 'Roman' camps

It would, then, have been possible for Iolo to look at Brandon Hill and Clifton Gorge with the eyes of a contemporary geologist and see what he did. But his concern to fit geological events into human history betrays another, antiquarian urge: a compulsive need to relate that 'struggle of titanic forces' to a written text and a historical-legendary timescale. The timescale and the texts are different, but the premise is not unlike that of Catcott and is part of what makes 'Brandon Hill' such an intriguing piece of writing.

One striking feature of Iolo's description is the use of place-names to confirm his hypothesis. Like Henry Rowlands, who interpreted the place-names of Anglesey druidically, and William Stukeley, who found 'Phoenician' dotted all over the Wiltshire downs, Iolo is determined to establish a historical, human framework for the formation of his landscape.[36] But here too, surprisingly, his Vulcanism overrides his Celtomania, ousting the eponymous (and one would have thought more obvious) 'St Brendan' from his own hill in favour of a Saxon compound. 'Brandon' is cleverly, though incorrectly, linked to similar local names – '*Brent-knoll*, *Brent Down*, a place called *Burn-ham* etc., all deriving their names from having been burned.'[37]

St Vincents Rocks and the 'Roman' camps at Clifton and Burwalls (now thought to be Iron Age forts)[38] have long been the focus of scholarly interest. As early as the 1480s the indefatigable William of Worcester noted that the Clifton camp ('castellum') 'was founded there before the time of William the Conqueror by the Saracens or Jews, by a certain Ghyst, a giant portrayed on the ground'.[39] By John Aubrey's time giants still loomed large in popular tradition, but could be confidently identified as 'Romans' by the educated antiquary. Various notes from Aubrey's *Monumenta Britannica*, compiled between 1665 and 1693, relate to the Clifton Gorge (memorably described as 'a most romancy place').[40] After repeating a local story about three gigantic brothers, one of them named 'Vincent', Aubrey writes:

> perhaps some sparke of Truth might be pick't out in this *Mist*. The Saxons were illiterate, Barbarous, and no Designers. The Romans were great Engineers, Dreyners etc: who made use both of their slaves and soldiers in such publick Workes. That one Vincent was author of a great Worke here the name yet seemes to impart: as also his name, that he was a Roman. […] Now the mariners often sayling by the cape of St Vincent in Portugale may have easily putt the *addition* of *Saint*.[41]

Barbarous and illiterate Saxons are another favourite Iolo hobby-horse, but his 'Brandon Hill' comments on the camps are very close to Aubrey here. That Aubrey is another advocate of the earthquake theory is also rather suggestive:

> It is clear, that these stones were shott by the Earthquake, when the great Crack was made at St Vincents rock: as at *Aetna*, and Mount Vesuvius, where the *Vulcano* breaks out, great stones are shott, and flie a prodigious way round about.[42]

Aubrey's work on the *Monumenta* was not published until the twentieth century, and (though some material did circulate in manuscripts) it seems unlikely that Iolo could have known these extracts; the coincidence in their interpretation of the landscape may reflect nothing more than a shared way of looking. Yet the earthquake theory was not universally favoured: Catcott, a committed Neptunist, obviously could not accept it, and William Barrett, in his *History and Antiquities of the City of Bristol* (1789), is at some pains to deny the possibility:

> This rock or cliff of St Vincent is not more remarkable for its amazing height than for its being equally so on both sides of the river, the strata declining to the south and answering on each side alike; a proof they were never broken or disturbed by the violent and irregular motion and disruption of an earthquake, and that the chasm betwixt for the passage of the tide was formed at the deluge, and the rock left in the same separate and divided state it was then split into, when the shell of the earth was cracked through, and the fountains of the abyss were broken up, according to the true Mosaic account of that great event.[43]

Another tangle of antiquarian scholarship may be partially unravelled in pursuit of *Caer Odor Nant y Baddon*, a name which, to borrow a phrase from William Barrett, 'has puzzled all antiquaries to account for'.[44] Iolo did not get this name, as he claims, 'from Nenius', but nor (although two other fleeting references elsewhere in his papers look equally dubious) did he make it up.[45] The earliest use of it to my knowledge is in the *Commentarii in Cygneam Cantionem* by the antiquary John Leland (1506–52), which identifies Bristol as 'Venta Belgarum Britannice, ut nunc loquuntur Cair Oder nante badon' ('which is now called Cair Oder nante badon').[46] This 'British' version of the name is not, however, mentioned in Leland's actual *Itinerary* under the description of Bristol. William Camden (though he objected to the identification of Bristol with the Roman *Venta Belgarum*) had no problems with Leland's use of the British name, and his version appears in Gibson's edition of *Britannia* thus: 'Scarce five miles from hence, the river *Avon* parts Bristol in the middle, call'd by the Britains [sic] *Caer Oder Nant Badon*, i.e. the City Odera in Badon-valley.'[47] Iolo read Camden very carefully, and he could have got the name from him; it is not impossible, on the other hand, that it was known in early Welsh antiquarian circles. Humphrey Llwyd's *Commentarioli Britannicae descriptionis fragmentum* ('English'd' by Thomas Twyne in 1573 as *The breuiary of Britayne*) also makes the identification, though in terms that seem closely to echo Leland.[48] The

name was in common enough use amongst the scholarly Welsh community for Iolo to use it, apparently naturally, in letters to Owen Jones in the early 1780s.

Whatever his source, Iolo's discussion of the name Caer Odor confidently ignores all this speculation about the meaning of *odor* (somewhat laboriously emended by Leland to a river-name 'Odera'), and makes instead the eminently sensible claim that the word is simply *godor*, a chasm or fault.[49] Because of their alignment across the gorge, Iolo reasons, 'the rending of the down must have occur'd subsequent to the formation of the camps'. For Iolo as for others of his time (Barrett included), these camps were Roman; yet Roman authors make no mention of the event, and so the earthquake must post-date their occupation. The Welsh name for Bristol offers a lateral hook into an appropriate context: the era of a legendary Welsh catastrophe, the flooding of Cantre'r Gwaelod in Cardigan Bay, mentioned in the early poetry and associated with 'Taliesin's time', the turbulent sixth century.[50] In short, Iolo writes the earliest record of the event into his own version of history. And then, as if from nowhere, he loses patience with Bristol altogether.

'Stupid Bristol': Merchants, Slaves, and the Chatterton controversy

By the 1790s Bristolians were used to being chastized for their dullness. Forty years earlier the embittered and volatile Richard Savage, with a distinctly unromantic view of the famous gorge, had castigated Bristol's citizens for their grubby provincialism:

> Thy sons! tho' crafty, deaf to Wisdom's call
> Despising all men, and despis'd by all
> Sons! while thy cliffs a ditch-like river laves
> Rude as thy rocks, and muddy as thy wave,
> Of thoughts as narrow as of words immense
> As full of turbulence as void of sense.[51]

The usual complaint was one of philistinism, of a city too preoccupied with commerce to consider less material matters – as Jonathan Barry showed recently, this reputation became something of a literary topos.[52] And it was not just the poets who complained. The historian William Barrett concluded his study of the Roman camps with sentiments not unlike those of Iolo:

> Although these curious remains of antiquity are within a mile of Bristol, yet little or no attention has ever been paid to them hitherto by a busy and commercial people, wholly engaged in other pursuits; and what is more to be admired, they have passed by unnoticed by Cambden, Gale, and other writers.[53]

Iolo, of course, includes Barrett himself amongst the unseeing: a 'Demon of Idiotic Dullness'. One would give much to know how far the surgeon's reputation as the dupe of Thomas Chatterton is in play here: by the time of its publication, the *History* was known to have relied on 'facts' and texts supplied by the young poet. Iolo, who by 1791 had also provided a mentor, Owen Jones, with a clutch of spurious poems for

his edition of Dafydd ap Gwilym, may have felt a sly superiority.[54] Then again, the outburst may simply reflect impatience with scholarship that does not fit his own vision of things: in the Newton Down piece, for example, it is Stukeley who has 'the misfortune to jabber a profusion of pedantic nonsense' about the source of the stones at Stonehenge.[55] Barrett may be too bookish for Iolo, who, as we have seen, took a fiercely practical interest in his subject.

There is, however, a specifically Bristolian 'stupidity' at work here too. The connection between economic prosperity and spiritual poverty was nowhere more obvious than in Bristol's association with the slave trade, and it is this context that perhaps best explains Iolo's attack on 'Stupid Bristol' in the winter of 1791. There are strong hints from the surviving correspondence that he had been involved in an epistolary fist-fight over the summer, and that the slave trade was the cause. In August, the surgeon David Samwell sent the following note to Iolo, who at that time was staying with William Owen Pughe and family in London:

> Dear Iorwerth,
> I have often had it in my thoughts to sing or say Something about your singularly disinterested Conduct respecting the Bristol Folks – but never put my thoughts into Action till this day […][56]

There follow several verses in praise of the 'low-born' Bard, whose 'Lib'ral Mind':

> Could look with scorn on Traffic's thriving Stealth
> On titled Meaness & on Scoundrel Wealth
> And spurning at the Rage of sordid Gain
> Could treat a venal Crew with just disdain.
>
> A Crew to rapine & to Murder bred,
> Who on the blood of Human Victims fed,
> Ne'er felt Compassion's tear bedew the Eye
> Nor heav'd for human Misery a Sigh
> But deaf to Justice, Mercy's soft appeal
> Before the Shrine of Avarice they kneel
> To her alone their yelling Vows they pay
> And on her Alters Human Victims lay.
>
> For sure, if equal Justice rules the Ball
> Some signal Vengeance on their Heads must fall,
> Some Earth-Convulsion shall their Towns entomb
> or Light'ning blast them in the Midnight Gloom,
> or Plagues destroy – nor leave a trace behind
> of all those Pests & Scourges of Mankind.

Samwell's threat of future cataclysms seems particularly suggestive in the light of Iolo's speculation some months later 'that those fires may encrease again to a terrible

height, may once more gather strength sufficient to burst again in volcanic eruptions out of their caverned recesses'. A psychological sub-text begins to emerge from the geology.

The nature of Iolo's 'disinterested conduct' is revealed in drafts of a letter that he must have sent earlier that summer. It is addressed to William Bulgin, a successful Bristol printer and bookseller, and concerns the subscription lists for Iolo's forthcoming collection of *Poems, Lyric and Pastoral*:[57]

> Messrs Lloyd and Brown, and you Sir, possibly, have some names for me, but, in all probability, I shall not be able to accept of many, if any of them, for it is my fixed resolution not to disgrace my list with the names of any villainous abettors of the *slave trade*, who so exultingly rejoiced lately in your City, on the failure of the humane Mr *Wilberforces* Bill for the abolition of that (this) inhuman traffic, for which *Bristol is* and always *has* been, so remarkably infamous. No consideration in the world could induce me to admit the name of a well wisher to this vile business into the Catalogue of those worthy ladies and Gentlemen, who have so highly sanctioned my publication, and who, on much more important occasions, are so nobly distinguished for their humanity. I am under the necessity, without I do violence to my feelings, of begging that you sir and others, would be pleased to return their money to all those dealers in human blood (Gentlemen I will not call them, they merit not that honourable distinction) who may, from I know not what motives, have left their rascally names at your several shops – But if any one, who possessed of a human heart, and not that of a tiger or a bloodhound; of a Christian rather than an infernal feeling, has honoured me with his or her name, I shall esteem it an honour indeed. No names from *Bristol* can possibly be admitted into my list without being so distinguished. If there are any of such a description left for me, be pleased to send them to Mr Meyler at Bath, M. Owen No 22 Penton Place Pentonville London or to me at Flimston near Cowbridge Glamorgan and they will, with your favour, be received with the warmest gratitude.

The response to this high-minded, not to say high-handed, declaration, was an extraordinary letter sent from Bristol a week or so after Samwell's. The sender, in flamboyant writing, signs himself 'Jacobus Placo'. I quote it here at length (the paper is somewhat damaged, and gaps are indicated with square brackets):[58]

> Bristol, 20 Augt 1791
>
> Sir,
>
> Your sciolous[59] Epistle by mere accident fell into my hands, and must confess it to be an original! I cannot help being astonishd at your profound Erudition! I suppose you have in the place of your Nativity such a seminary as that of Billingsgate,[60] where the pupils will take a priviledge of railing at their Superiors with impunity, but beware; you may meet with Some Choleric person like YourSelf that may bite more hard; I am writing designedly for your bennefit if you are wise, if foolish, for your correction.

> Your scabrous opinion of us Bristolians may raise our Contempt as well as pity for you, if you are not more Cautious – – – – – – – As I am an indepentant man, & retir'd into the Country, I have leasure, and propensity, to give a little wholsome advice to inconsiderate youth, f[or] altho I [?] [o]ld, and, you must be Young, from your ignorance of [?]ng, Yet if you dare to hold such low opinio[ns] of the [peo]ple of Bristol I would ride fifty Miles to Clap your Nose in the Bastile of my Fingers; And yet, I am as cool as a Welchman! – – – – I presume you have Solicited some of this City (the Second in England for rewarding Merit) without finding that Encouragement you Expected, (being Cynical in your Nature) ra[i]l where Sensibility admire, be angry where you ought to Extol; But the Bristolians have more Genuine discernment, fm the Gentleman, to the Loquacious Hair-dresser, than to suffer a poetaster to pass on us for a good poet. – We acquire Wealth by industry, and know too well the value of it, to throw any of it away on insensible publications: and I think I have enough of the Spirit of Divination to know your scribbling is not worth our patronage […].[61]
>
> The influx of our River of Navigation imports us the riches of Asia, and its luxeries; The Ships of our American Islands wafts us the best of its productions, to Exhilerate life, and Exonerate our Minds – – – – these Cargo's we are assisted with by the Labour of the slaves from Africa, thus the other three Quarters are subserviant to Europe, And this could never have happend without the concurrence of Heaven, withou[t] omnipotence, those Exiles sent from Africa are wisely Sent and not without divine appointment – I make no doubt but they are the worst of their people, sent to foreign Climes to make them better; let the ignorant, and inconsiderate look to Botany Bay; Had you been an impartial being or a Sensible one, you must have known, Bristol have not been "so remarkably infamous" and I have only to say yt you are infamous for such an Expression; but I am of an opinion your "Poems" will render you infamous Enough. You say you intend to Superintend the Press yourself; how naturally you Step, the Printers I believe is never without Devils Enough, but this is I suppose a Pandæmonian work, and require one of its prime Journeymen – – – do stay in your Proper Sphere whenever you are Employd.
>
> I will Endeavour to Send you two or three Africans to converse with – I would have pity'd you, had you been Modest; I would have been a Subscriber had you any Merit, But you will "not be able to accept of many names if any" – – To give the Epithet of Rascals, to the usefull (and in general worthy) Citizens of Bristol, at once betrays your Head & Heart, – […]

He finishes with an exhortation to repent, an elaborate little poem on Williams the 'Printer's Devil', and instructions to leave any further communications at Mr Bulgin's the Stationers, 'as My Servant sometimes calls there'. The writer is undoubtedly William Bulgin himself. Elsewhere in the manuscripts Iolo identifies him in a snatch of doggerel written on a tiny scrap of paper, headed 'Rhymes for Bristol':[62]

> Hero, Nero, dear-o
> divulging, Bulging, promulge,
> indulge, emulge.
>
> Placo, awake-o,
> [I'll read a paper from the]
> do, read that paper from the shelf
> twill tell ye how the wayward elf
> full of the proud bristolian self
> assumed the name of placo.

The tone of this flyting match is rather hard to seize: while one can see that 'Placo's' wounded Bristolian pride might be genuine, his arguments in favour of slavery sound like deliberate parody, and the letter is probably a spoof. Though Iolo refers in a vicious note to 'Messrs Bulgin & Co, Cowskin heroes, alias negro drivers, alias Bloodhounds at Bristol', it is hard to believe that one of John Wesley's circle would have held such views in earnest.[63] Whatever the exact nature of the fracas, Iolo's feelings about Bristol after the defeat of Wilberforce's bill are clear enough. The inflammatory letter to the printers was no publicity stunt: his convictions were deeply held. Besides the flamboyant gestures (he would later advertise that the sugar in his grocer's shop in Cowbridge was 'uncontaminated by human gore') there are more intimate testimonies, as in this letter to his wife written in 1790:

> we have all or most of our [g]old & silver those Gods So much adored even by the best people, comes from the mountains of PERU, where we read that the cruel Spaniards chain their slaves both whites & black to the rocks a hundred fathom under ground. and once there they are never more permited to see the light of the day. but work naked going to and fro the lenght of their Chain for life. the poor blacks in our sugar Islands fare not much better, the tears and even blood of those poor wretches. makes up a considerable part of the sugar which is so sweet to us but very bitter to them.[64]

The abolitionist cause had several literary supporters in Bristol: the year 1788 saw anti-slavery poems from Ann Yearsley (the 'Bristol Milkwoman') and her patron Hannah More. Both women are named among the subscribers to Iolo's own *Poems*: Yearsley sent her name for the list in August 1791, and More was one of Iolo's most energetic supporters.[65]

Beyond the specific issue of slavery, of course, was the general turmoil of the Revolution in France and its repercussions in Britain: the first part of Tom Paine's *Rights of Man*, a work that influenced Iolo profoundly, had appeared in February that year. Summer saw the escape and recapture of Louis and Marie-Antoinette, and the burning of Joseph Priestley's house and library by a Church-and-King mob in Birmingham.[66] Accounts of the Revolution from all political angles drew readily on the imagery of natural disaster, whether liberating and inevitable, or frighteningly disruptive: 'Let them not', wrote Edmund Burke in 1790 in true catastrophist style,

'break prison to burst like a *Levanter*, to sweep the earth with their hurricane and to break up the fountains of the great deep to overwhelm us.'[67] Iolo's vision of the Bristol 'volcano', consciously or otherwise, is perhaps as much the result of political context as of contemporary geology.

There is one final, more shadowy, aspect of the view from Brandon Hill to sketch in. The last sentence of Iolo's 'Observations', with its reference to William Barrett, is just enough to invoke the ghost of Thomas Chatterton. Twenty or so years earlier, and only a few months before his own departure for London, the sixteen-year-old Chatterton had stood in the same place and surveyed his city with mixed feelings. Like Iolo (and having also read his Catcott) he was uplifted by the 'huge cleft rocks' and the thought of 'dire convulsions' splitting the mountain; like Iolo he was less enthusiastic about the city itself, with the dull and muddy Avon winding beneath him – 'Fixt in a stupor by the chearless plain' – symbolizing Bristolians lack of interest in the 'fairy flights' of the imagination.[68] From the late 1770s, as the Chatterton myth began to gather some of its extraordinary strength, Bristol's reputation for philistinism was further compounded by its apparent mistreatment of the young suicide poet: his natural genius ignored at home, he had been forced to head for London, and London had killed him. Though modern interpretations of the story now sound rather different, this would have been the version familiar to Iolo.[69]

The links between Iolo Morganwg and Thomas Chatterton are tantalizing. Most obviously, there is a striking geographical proximity: Iolo's Glamorgan, described by G. J. Williams in 1956 as 'one of the great creations of the Romantic period in Wales',[70] is only a boat ride across the Severn estuary from Chatterton's Bristol. Like Chatterton's Bristol, it too was essentially 'an imaginary construct from books, local monuments, and local topography',[71] involving an impressive range of skills and genres – poetic, linguistic, genealogical and antiquarian. There is also their closeness in time, though this is somewhat obscured by Chatterton's absurdly early death: they were born within six years of each other, and Iolo was twenty-three and just beginning his literary career when Chatterton died in 1770. As a reader of periodicals and a regular visitor to Bristol in the late 1770s, he cannot have avoided the controversy over the authenticity of the poems ascribed to Thomas Rowley: indeed, we know he had read selections of them in the 1780s, and that Robert Southey made him a present of his three-volume edition of the collected poems in 1803.[72] Yet, beyond scornful references bracketing him with Macpherson as a 'forger', there is little evidence of Iolo actually reading or thinking about Chatterton's work. On balance, it also seems unlikely that his own passion for recreating the past was directly inspired by Chatterton's example. Instead, as so often, the Bristol poet's presence is most evident in its mythic form, as the type of the poet dying for his art. As Geraint Phillips has noted, this presence is strongest precisely in the months immediately after Iolo left Bristol for London in 1791.[73]

There is something compelling in the thought of Iolo 'following' Chatterton from the top of Brandon Hill to cheap lodgings in Holborn. For the first few months after arriving in London he stayed, as usual, with William Owen Pughe and his family

in Pentonville, but when they had another child and had to move house, he found a room in Brooke's Market, 'within a door or two' of the famous Brooke Street garret. Although in many ways this was intellectually and socially a stimulating time for him (the hunt for Welsh-speaking American Indians was in full cry, and Iolo played a key part in organizing the expedition to discover them),[74] there are clear signs of something like a nervous breakdown in the months between July and December of 1792. In a series of distressed and barely coherent letters to his wife, he describes his miserable lodgings, his poverty, the effects of laudanum on his health and the hellish business of getting his poems through the press. The sentiments are unnervingly unlike him:

> I have but one hope left now, which is that I shall soon die, for it is impossible for me to be relieved any other way. send me one letter more, and let me see in it the names of my dear little ones, I shall never see their faces again. Poor *Chatterton* who lived and died almost the next door to where I am, found means, like myself, to keep his distresses unknown.[75]

Thus, in the early 1790s, the man who was among the best-read and most versatile literary figures in Wales (and who was usually well-aware of the fact) could sign himself *de profundis*, 'no more than an empty name'. Small wonder that the persona that emerges from his *Poems, Lyric and Pastoral*, which finally appeared in 1794, is a confused and vitriolic mixture: the humble provincial poet – the model he 'sold' to his wealthy patrons – sits very uneasily with the polemical 'Welch Bard'. Innumerable tensions form the backdrop to this work (which begins with what must be one of the most querulous introductions to a volume of poems ever written), from Iolo's ambivalence about patronage, to the strain of separation from his increasingly impoverished family – the latter revealed in defensive letters home full of guilt and self-pity. There is also a strong possibility that his politics were bringing him into dangerous waters, as the revolution in France turned to Terror, and the British government dealt ever more harshly with voices of opposition at home.[76] London did not kill him as it had apparently killed Chatterton, but the publication of *Poems, Lyric and Pastoral* was a turning-point for Iolo. Though he remained involved with the literary and antiquarian projects of the London Welsh, 1795 marks a definitive return to Wales.

Brandon Hill Revisited

Brandon Hill today is a park and nature reserve, with little concreted paths leading up through streams and ceremonially-planted trees to the Victorian Cabot Tower. The top of the tower gives an expanded view of the horizons that Iolo and Chatterton would have seen, but nearer to hand the changes are more drastic. Much of the north and eastern sides of the hill have gone under the 'new buildings' that Iolo refers to, and though the park area near the top is full of dips and hollows, it is difficult to identify his 'craters' through the landscaping. Even from the steeply-rising south side there is no obvious sign of anything corresponding to his description of masses of naked Lava

'eight feet at least above the ground': it seems highly unlikely that he would have mistaken the remains of civil war forts in this way. The 'Lava' itself, which Iolo describes as full of 'iron', must be the red Bristol sandstone out of which much of the medieval city was built: Brandon Hill Grit, a deep-red quartzitic sandstone, is indeed full of 'fragments', fused together, though not by fire. It may well be that Iolo saw dramatic natural outcrops of this rock at the bottom of the hill on the south side which have since disappeared with the construction of the Jacobs Wells Road, and the reinforcing of the steep bank or cliff there.[77]

The distinctive shape of the hill, the redness of the sandstone, and the proximity of coalfields and the famous hot springs proved, with the suggestive place-names, an irresistibly volcanic combination. Iolo's notes on Brandon Hill are not the work of a dreamer; but nor do they have the calmness and objectivity of science. In the passage on Newton Down, Iolo comes close to capturing the nature of his own enthusiasm in the character of the Philosopher:

> The common observer, or rather unobserving beholder, passes by these wonderful things without bestowing a single thought upon them, or if he thinks, it is that they have been coeval with the world, that they were never any where else, familiarity with any object obliterates its *marvelosity* (if I may use the term). But the *Philosopher* who avails himself of every oportunity of looking as far as possibly he can into the interior of this Globe, who has heard, and considered, the accounts given by *miners* (rather than vain academical spinners of Theories, that however specious they on a first glance appear, prove always fallacious in the end, extremely so, ridiculously so.) *he* I say knows of what the exterior shell of this earth consists of, of what nature its various strata of stones, minerals, earths etc are, and that having arrived at their utmost depths he finds an immense body of *Granite*, penatrable by no hitherto known powers of art.[78]

The word *marvelosity* says it all. One of Iolo's greatest gifts is his ability to infuse real landscapes, real places, with precisely that quality.

[1] See, for example, Marilyn Butler, 'Revolving in Deep Time: the French Revolution as Narrative', in Keith Hanley and Raman Selden (eds.), *Revolution and English Romanticism: Politics and Rhetoric* (Hemel Hempstead, 1990), pp. 1–22; John Wyatt, *Wordsworth and the Geologists* (Cambridge, 1995).

[2] *The New History, Survey and Description of the City and Suburbs of Bristol, or complete Guide*, printed, published and sold by W. Matthews (Bristol, 1794), p. 89.

[3] NLW MS 13174A, p. 22a (an unnumbered page between 22 and 23).

[4] NLW MS 13089E, pp. 174–6. The text given here is complete and lightly edited: I have added paragraph breaks, capitalized new sentences, removed some italics (e.g. place-names) and the more distracting commas. Iolo's additions and deletions have been incorporated silently, and I have retained his spelling.

[5] Abraham Mills, 'Some Account of the Strata and Volcanic Appearances in the North of Ireland and Western Islands of Scotland', *Philosophical Transactions,* 88 (1790), 73–100 (at p. 99).

[6] Ibid., p. 96.

[7] William Hamilton, 'A Letter… giving an Account of certain Traces of Volcanos on the banks of the Rhine, ibid., 68 (1778), 1–6 (at p. 3). For Hamilton's life, see David Constantine, *Fields of Fire: A Life of Sir William Hamilton* (London, 2001).

[8] Hamilton, 'A Letter … giving an Account', p. 5.

[9] 'An Account of the Earthquake which happened in Italy, from February to May 1783', *Philosophical Transactions*, 73 (1783), 169–208 (at p. 173). This report from a correspondent is corrected and refined by Hamilton's own observations in the second half of the letter.

[10] See Roy Porter, *The Making of Geology: Earth Science in Britain 1600–1815* (Cambridge, 1977), pp. 157–83, and David Oldroyd, *Thinking about the Earth: A History of Ideas in Geology* (London, 1996), pp. 86–107.

[11] BL Additional MS 15024, Letter 1118. There is surprisingly little about Stonehenge in Iolo's papers, but I am currently working on an early letter with some interesting material about the stones near Avebury. Iolo's entire correspondence is being edited by David Ceri Jones and Ffion Jones at the University of Wales Centre for Advanced Welsh and Celtic Studies, Aberystwyth.

[12] NLW MS 13221E, pp. 143–46 (at 143). For Smith's life and work, see Simon Winchester, *The Map that Changed the World: the Tale of William Smith and the Birth of a Science* (London, 2002); Porter, *The Making of Geology*, pp. 177–80; Oldroyd, *Thinking about the Earth*, pp. 110–14. It is quite possible that Iolo could have seen Smith's important Table of Strata, which circulated in handmade copies in the Bristol region from 1799: see Winchester, *The Map that Changed the World*, pp. 137–41.

[13] NLW MS 13221E, pp. 143–6; see also NLW MS 1808Eii, item 1526. For Walter Davies, and for Iolo's involvement with the Agricultural Survey, see David Ceri Jones, 'The Board of Agriculture, Walter Davies ('Gwallter Mechain') and Cardiganshire c. 1794–1815', *Ceredigion*, XIV, no. 1 (2001), 79–100. As various surviving notebooks of his tours through Wales make clear, Davies was himself a keen geologist: see, for example, the descriptions of rocks and strata in NLW MS 1659B.

[14] Iolo's contribution to W. D. Conybeare and William Phillips, *Outlines of the Geology of England and Wales* (London, 1822) is part of a series of 'Notes' credited to George Bellas Greenough, who became President of the Geological Society at its inception in 1807. The observations (on p. 277) are wrongly attributed to Mr G. Williams but are almost certainly by Iolo: compare, for example, the material in NLW MS 13129A, pp. 522–6, or NLW MS 13089E, p. 159. See also Elijah Waring,

Recollections and Anecdotes of Edward Williams (London, 1850), pp. 109–10. I do not know how Greenough came to have them.

[15] NLW MS 21285E, Letter 911.

[16] NLW MS 21285E, Letter 868. The addressee is probably the Revd D. Turner, who co-authored a *General View of the Agriculture of Cardigan* (1794). For the growth of this and similar county societies, see R. J. Colyer, 'Early Agricultural Societies in South Wales', *Welsh History Review*, 12, no. 4 (1985), 567–81.

[17] NLW MS 21286E, Letter 958.

[18] Ibid.

[19] NLW 21286E, Letter 957.

[20] Ibid.

[21] Winchester, *The Map that Changed the World*, p. 124.

[22] NLW MS 21286E, Letter 957. It is worth noting how many of these have mineralogical interests: Iolo's concerns are primarily with the interface between geology and agriculture. Richard Kirwan (1733–1812), President of the Dublin Geological Society, produced the influential *Elements of mineralogy* (1784 and 1794–6); Robert Townson (1763–1827) wrote a *Philosophy of Mineralogy* in 1798 and Robert Jameson (1774–1854) a *System of Mineralogy* in 1808. Robert Bakewell (1768–1843) published his successful textbook, *An Introduction to Geology*, in 1813, which Roy Porter describes as 'the first genuinely popular text' (p. 211). The necessary simplification may not have been to Iolo's taste. John Smeaton (1724–92), the 'father of civil engineering', was an early advocate of the practical benefits of the study of geology. All are discussed more or less extensively in Porter, *The Making of Geology.*

[23] NLW MS 13089E, p. 170.

[24] Cf. John Wyatt's caveat that 'Granite' was in this period a 'term of convenience for what were deemed to be the oldest most "primitive" rocks', *Wordsworth and the Geologists*, p. 21.

[25] NLW MS 13089E, p. 171.

[26] Ibid., pp. 170–1.

[27] Alexander Catcott (1725–79) was brother to George Catcott, one of Thomas Chatterton's early mentors. See Michael Neve and Roy Porter, 'Alexander Catcott: Glory and Geology', *The British Journal for the History of Science*, 10 (1977), 47–70.

[28] Alexander Catcott, *A Treatise on the Deluge* (London, 1761), p. 2. Catcott's italics.

[29] Neve and Porter, 'Alexander Catcott'.

[30] NLW MS 21319A, p. 9.

[31] For De Luc, see Porter, *The Making of Geology*, pp. 198–202. Iolo may have read his series of letters attacking Hutton's theories (which were widely perceived as anti-religion) in the *Monthly Review*, II, III ,V (1790–1).

[32] For Iolo and Hu Gadarn, see Rachel Bromwich, *Trioedd Ynys Prydein in Welsh Literature and Scholarship* (Cardiff, 1969), pp. 21–2.

[33] NLW MS 13115B, p. 105 (entitled 'Agricultural Observations 1796').

[34] Compare, for example, the comments of William Buckland: 'We may surely therefore feel ourselves authorized to view, in the Geological arrangement above described, a system of wise and benevolent contrivances prospectively subsidiary to the wants and comforts of the future inhabitants of the globe, and extending itself onwards, from its first formation, through all the subsequent revolutions and convulsions that have affected the surface of our planet' (cited in Conybeare and Phillips, *Outlines of the Geology of England and Wales*, p. lv).

[35] Porter, *The Making of Geology*, p. 142.

[36] Henry Rowlands, *Mona Antiqua Restaurata* (Dublin, 1723), pp. 113–14 and passim; William Stukeley, *Abury: a Temple of the British Druids with some others Described* (London, 1743), pp. 16, 77. Stukeley's own thoughts on geological catastrophes appeared in *The Philosophy of Earthquakes* (1756). See David Boyd Haycock's informative *William Stukeley*: *Science, Religion and Archaeology in Eighteenth-Century England* (Woodbridge, 2002).

[37] In the 1794 guidebook the hill is straightforwardly 'named from a chapel dedicated to St *Brendanus*, which formerly stood on its summit' (*The New History*, p. 89). The fifteenth-century writer William of Worcester included a prayer to St Brendan in his *Topography of Medieval Bristol*, ed. Frances Neale (Fishponds, 2000), pp. 54–5. Modern scholarship agrees that the Irish saint is the likely eponym: see A. H. Smith, *The Place-Names of Gloucestershire* (4 vols., 1964–5), III, p. 95. By a nice irony, one of Iolo's other 'burnt' names is also of Celtic origin: Brent Knoll probably derives from *Brigantia* ('high place' or the name of the goddess), as does Brentor in Devon (which, in a further twist, actually *is* a volcano). See Eilert Ekwall, *The Concise Oxford Dictionary of English Place-Names* (4th ed., Oxford, 1960), p. 63. Thanks to David Parsons and Jon Cannon for these references.

[38] E. K. Tratman, 'The Prehistoric Archaeology of the Bristol Region', in C. M. Innes and W. F. Whittard (eds.), *Bristol and its Adjoining Counties* (Wakefield, 1973), pp. 147–62 (at p. 160).

[39] Neale (ed.), *The Topography of Medieval Bristol*, p. 35.

[40] John Aubrey, *Monumenta Britannica [1665–1693]*, ed. John Fowles and annotated by Rodney Legg (2 vols., Sherborne, 1980–2), II, p. 1042.

[41] Ibid., p. 1028.

[42] Ibid., p. 1037.

[43] William Barrett, *The History and Antiquities of the City of Bristol* (Bristol, 1789), p. 92. Barrett was part of the literary-antiquarian circle which included the Catcotts and Thomas Chatterton: see Jonathan Barry, 'The History and Antiquities of the City of Bristol: Chatterton in Bristol', *Angelaki*, I, no. 2 (Winter 1993–4), 55–81.

[44] Barrett, *The History and Antiquities of the City of Bristol*, p. 16.

[45] 'Caerodor nant y Badd.' is identified as Bristol in a list of 'Caerau Ynys Prydain' ('Cities of the Island of Britain'), allegedly taken from a copy by Ben Simon of 'Llyfr Iaco ap Dewi' (NLW MS 13122B, p. 253); *Caer Odornant* appears at the end of another long list of *caerau* taken (again, allegedly) from the fifteenth-century Red Book of Hergest. Iolo has added the further comment: 'nid yw'r diweddaf sef Caerodornant yn Llyfr B. Simon' ('this last, ie Caerodornant, is not in B. Simon's book'). See NLW MS 13122B, pp. 318–19. The name does not in fact appear in the Red Book list, and this may be an example of Iolo manipulating his sources. G. J. Williams notes other instances of Iolo attributing his own creative additions and variations to manuscripts copied by Iaco ab Dewi (James Davies, 1648–1722) and his disciple Ben Simon (1703–93): see *Iolo Morganwg: Y Gyfrol Gyntaf* (Caerdydd, 1956), pp. 392–7. In a letter to Iolo in 1815, Dr J. C. Prichard from College Green, Bristol asks him for further information about the meaning of the name and the nature of his sources, on behalf of a 'Mr Sayer', presumably the Revd Samuel Seyer, whose *Memoirs, Historical and Topographical of Bristol and its Neighbourhood* came out in 1825. See NLW MS 21282E, Letter 387.

[46] John Leland, *Commentarii in Cygneam Cantionem*, in *The Itinerary of John Leland the Antiquary*, (3rd ed., 9 vols., Oxford, 1769), IX, p. 100. See also James P. Carley, 'John Leland's *Cygnea Cantio*: A Neglected Tudor River Poem', *Humanistica Lovaniensia*, 32 (1983) 225–41; for Leland and Wales, see Caroline Brett, 'John Leland, Wales, and Early British History', *Welsh History Review*, 15, no. 2 (1990), 169–82. I am grateful to Professor Carley for looking into Leland's possible sources for the name.

[47] William Camden, *Britannia: or, a Chorographical Description of Great Britain and Ireland, together with adjacent islands*, ed. Edmund Gibson (3rd ed., 2 vols., London, 1753), I, p. 94.

[48] 'the Isle of Avalonia, whose Citie is Venta, now Brystow, but in antique time the Britaynes called it Caër oder yn Nant Badon, that is to say, the Citie Odera, in the Valley of Badon', Humphrey Llwyd, *The breuiary of Britayne*, trans. Thomas Twyne (n.p., 1573), f. 18^{v}. See also R. Geraint Gruffydd, 'Humphrey Llwyd: Dyneiddiwr', in W. J. Rees (ed.), *Y Meddwl Cymreig* (Caerdydd, 1995), pp. 62–84.

[49] *Geiriadur Prifysgol Cymru* s.v. *godor* does not mention Caer Odor, but has other examples suggesting that the term could be used toponymically: e.g. Penygodor, Esgair y Godor. Although not as old as 'Nennius' (ninth century), the name Caer Odor need not be a late invention. It has recently been dismissed as such by Richard Coates and Andrew Breeze, *Celtic Voices, English Places: Studies of the Celtic Impact on Place-Names in England* (Stamford, 2000), p. 13, but the fact that the sixteenth-century antiquarians (Welsh speakers included) were all keen to find an unnecessarily elaborate Roman explanation perhaps strengthens the case for its prior existence. There is clearly scope for a more detailed study of British/Welsh names for places in England from these later sources.

[50] For the growth of this legend, see Rachel Bromwich, 'Cantre'r Gwaelod and Ker-Is', in C. Fox and B. Dickins (eds.), *The Early Cultures of North-West Europe: H. M. Chadwick Memorial Studies*, (Cambridge, 1950), pp. 217–41; James Doan, 'The Legend of the Sunken City in Welsh and Breton Tradition', *Folklore*, 92 (1981), 77–83.

[51] Richard Savage, 'London and Bristol delineated' (lines 53–8), in *The Poetical Works of Richard Savage in two volumes with the Life of the Author* (2 vols., Edinburgh, 1780), II, pp. 141–5. See also Richard Holmes, *Dr Johnson and Mr Savage* (London, 1993). Iolo owned a copy of Savage's poems during his period in London in the early 1790s: see NLW MS 13136A, p. 149.

[52] Jonathan Barry, First Annual St Mary Redcliffe Lecture, given 7 September 2002 at the Thomas Chatterton Conference, Bristol.

[53] Barrett, *The History and Antiquities of the City of Bristol*, p. 22.

[54] These texts, included as an appendix to William Owen and Owen Jones's edition of the poems, *Barddoniaeth Dafydd ab Gwilym* (London, 1789), are analysed by G. J. Williams in *Iolo Morganwg a Chywyddau'r Ychwanegiad* (Llundain, 1926).

[55] NLW MS 13089E, p. 172.

[56] NLW MS 21282E, Letter 450. David Samwell (Dafydd Ddu Feddyg) was one of the most colourful characters among the London Welsh; he sailed with Captain Cook as ship's doctor and wrote an account of his death. See E. G. Bowen, *David Samwell [Dafydd Ddu Feddyg] 1751–1798* (Cardiff, 1974).

[57] NLW MS 21400C, item 24a.

[58] NLW 21282E, Letter 382.

[59] *sciolous*: 'having a smattering of knowledge' (*Oxford English Dictionary*).

[60] Billingsgate was the fish-market in London.

[61] A section is omitted here for the sake of space.

[62] NLW MS 21419E, item 68.

[63] NLW MS 21400C, item 23. Bulgin printed the proceedings of the Methodist conference held in Bristol in 1786, and saw Wesley regularly; his wife Sarah Bulgin, who died aged twenty-nine in 1787, was the subject of an early Methodist biography. With his business partner Robert Rosser, Bulgin relaunched the *Bristol Mercury and Universal Advertiser* in 1790. See Frank Baker, 'Wesley's Printers and Booksellers', *Wesley Historical Society Proceedings*, XXII (1939–40), 137–40. Though Wesley himself wrote and preached strongly in favour of abolition, he did not avoid those who held opposite views: on the complex interrelations of abolitionist and slave-trading networks in Bristol, see Madge Dresser, *Slavery Obscured: The Social History of the Slave Trade in an English Provincial Port* (London and New York, 2001), pp. 132–61.

[64] NLW MS 21285E, Letter 787.

[65] Ann Yearsley, *A Poem on the Inhumanity of the Slave-Trade* (London, 1788); Hannah More, *Slavery, A Poem* (London, 1788). On these and other women's involvement in the abolitionist debate, see Dresser, *Slavery Obscured*, pp. 142–7. The Iolo correspondence contains several letters to and from More, and Yearsley's name is mentioned several times: like other provincial 'peasant' poets (Burns amongst them), she provided a model for Iolo in his pastoral mode.

[66] Iolo had links with Priestley and other Unitarian radical thinkers, and the *Rights of Man* was a great influence, though he rejected Paine's thoughts on religion. Geraint H. Jenkins is currently working on Iolo's radicalism.

[67] Edmund Burke, *Reflections on the Revolution in France* (1790), ed. J. Pocock (Indianapolis, 1987) p. 51. A powerful nineteenth-century image of the 1789 Revolution portrayed as a volcanic explosion is reproduced in Maurice Krafft's excellent introduction to vulcanology: *Volcanoes: Fire from the Earth* (London, 1993), p. 12.

[68] 'Clifton', lines 67–8, in Donald S. Taylor with Benjamin B. Hoover (eds.), *The Complete Works of Thomas Chatterton: A Bicentenary Edition* (2 vols., Oxford, 1971), I, p. 343. Taylor (notes, II, p. 987) dates the poem to July 1769, but it seems not to have been published until January 1792, in the *European Magazine*; Iolo would not have known of it when he climbed Brandon Hill.

[69] See Nick Groom, *The Forger's Shadow* (London, 2002) and idem (ed.), *Thomas Chatterton and Romantic Culture* (London, 1999); the theory that the famous 'suicide' was an accident is presented by Richard Holmes, 'Thomas Chatterton: the case reopened', reprinted in idem, *Sidetracks: Explorations of a Romantic Biographer* (London, 2000), pp. 5–50. See also Gwyneth Lewis's useful comparative study, 'Eighteenth-Century Literary Forgeries with special reference to the work of Iolo Morganwg' (unpubl. University of Oxford D.Phil. thesis, 1991).

[70] 'un o greadigaethau mawr y cyfnod rhamantaidd yng Nghymru', Williams, *Iolo Morganwg: Y Gyfrol Gyntaf*, p. 320.

[71] Taylor (ed.), *The Complete Works of Thomas Chatterton*, I, p. xliv.

[72] See NLW MS 21283E, Letters 512, 513 and 513a (from Daniel Walters), and NLW MS 21280E, Letter 101 (from David Davis).

[73] Geraint Phillips, 'Math o wallgofrwydd: Iolo Morganwg, Opiwm a Thomas Chatterton', *National Library of Wales Journal*, 29 (1996), 391–410. I am currently working on a detailed exploration of the links between Iolo, Chatterton, James Macpherson and Hersart de La Villemarqué. For Iolo's connections with the Romantics (Coleridge, Wordsworth, Southey), see Damian Walford Davies, *Presences that Disturb: Models of Romantic Identity in the Literature and Culture of the 1790s* (Cardiff, 2002), pp. 134–92.

[74] Gwyn Williams, *Madoc: the Legend of the Welsh Discovery of America* (Oxford, 1987).

[75] NLW MS 21285E, Letter 812 (dated 27 October 1792).

[76] This interpretation is explored by Lewis in her excellent discussion of Iolo's *Poems* in 'Eighteenth-Century Literary Forgeries', pp. 167–201. For the peasant-poet model, and the influence of Robert Burns, see Daniel Huws, *Caneuon Llafar Gwlad ac Iolo a'i Fath* (Aberystwyth, 1993).

[77] The plan of the city in Matthews's *The New History* (1794) shows that the old footpath from Clifton passed under the steepest part of the hill. For descriptions of the forts, see the National Monuments Record (NMR) UID 198330, UID 198332 and UID 198340. My thanks to Jon Cannon, formerly of English Heritage, for his help in deconstructing Iolo's interpretation of the site.

[78] NLW MS 13089E, pp. 171–2. 'Specious' is probably used here in the obsolete sense 'fair or pleasing to the eye or sight' (*OED*, definition 1). I would like to take this opportunity to thank the many people who have helped with queries, especially Jon Cannon, David Constantine, Geraint H. Jenkins, David Parsons, the staff of the National Library of Wales and the Library of Queen's College, Oxford, and my colleagues on the Iolo Morganwg Project at the Centre for Advanced Welsh and Celtic Studies, Aberystwyth.